

Claims

1. A method of isolating and culturing mesenchymal stem cells from cryopreserved umbilical cord blood, comprising the steps of:

5 thawing cryopreserved umbilical cord blood and adding α MEM (alpha-minimum essential medium) thereto, followed by centrifugation to harvest monocytes;

 isolating CD133 positive cells from the obtained monocytes; and

10 subjecting the isolated cells into suspension culture in the α MEM containing Stem Cell Factor, GM-CSF (granulocyte-macrophage colony-stimulating factor), G-CSF (granulocyte colony-stimulating factor), IL-3 (interleukin-3) and IL-6 (interleukin-6).

15 2. The method as set forth in claim 1, wherein the umbilical cord blood is added with 2-fold volume of the α MEM, overlapped on Ficoll-Hypaque, and then subjected to centrifugation to harvest monocytes.

20 3. The method as set forth in claim 1, wherein the α MEM for culturing monocytes further comprises an antibiotic, an anti-fungal agent, glutamine and fetal bovine serum.